

**Re: Fw: LDR regulatory question****Elaine Eby** to: Dave Bartus

02/09/2012 12:51 PM

From: Elaine Eby/DC/USEPA/US  
To: Dave Bartus/R10/USEPA/US@EPA

Dave-

So if it's both new and remediation waste I would say that you can't treat in the trench. Kindof the ssame principle as the mixture rule. Is this response even on point?

Please let me know if you would like to re-convene the group and have another call.

Elaine

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**Dave Bartus****Thanks, Elaine. I recalled our earlier conversati...****02/09/2012 12:15:19 PM**

From: Dave Bartus/R10/USEPA/US  
To: Elaine Eby/DC/USEPA/US@EPA  
Date: 02/09/2012 12:15 PM  
Subject: Re: Fw: LDR regulatory question

Thanks, Elaine. I recalled our earlier conversation, but was unable to find the e-mail, so your re-send is much appreciated and exactly what I was looking for. My apologies for poor recordkeeping...

By way of background, it is entirely possible that the two landfills at the focus of this issue may receive remediation waste. That said, the in-trench treatment issue specifically rears its ugly head with regard to non-remediation waste. Also, the issue is specific to traditional landfills - not staging piles, CAMUs, SIs, etc.

Dave

**Elaine Eby****Hi Dave- Got your message and apologize that I...****02/09/2012 05:44:47 AM**

From: Elaine Eby/DC/USEPA/US  
To: Dave Bartus/R10/USEPA/US@EPA  
Date: 02/09/2012 05:44 AM  
Subject: Fw: LDR regulatory question

Hi Dave-

Got your message and apologize that I haven't gotten back to you. We did have a conference call about this issue with OECA and Peggy Vyas of ORCR (see my initial response below. I think we said that no, you can't treat in the trench, but remediation wastes were different. I will read your recent email and get back to you.

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----- Forwarded by Elaine Eby/DC/USEPA/US on 02/09/2012 08:42 AM -----

From: Elaine Eby/DC/USEPA/US  
To: Dave Bartus/R10/USEPA/US@EPA  
Date: 06/01/2011 09:47 AM  
Subject: Re: LDR regulatory question

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Dave-

Got your message. Would like to run this past OECA (Jim Thompson) and OGC (Steve Silverman). But first, I have a question, are these remediation wastes? If so, there are some LDR "Special Issues" that pertain to these wastes. See: Page 8.3 of the document, Land Disposal Restrictions: Summary of Requirements, Revised August 2001. USEPA, Offices of Solid Waste and Emergency Response and Enforcement and Compliance Assurances, EPA30-R-01-007, [www.epa.gov/osw](http://www.epa.gov/osw) (you can get it by googling)

If they are not remediation wastes, then I would think the answer to your first question is yes, they have to be treated before land disposal (with the exceptions of remediation wastes and liquids in surface impoundments -see answer in red below) , Question two, there is no provision, that I know of, for treatment variances that allow for treatment in the land disposal unit. Again, remediation wastes are different.

Elaine

Dave- don't know if you heard but Rhonda Minnick passed away suddenly last November. We lost our, LDR historian, LDR expert, but mostly our good friend, her passing has truly left a hole in our hearts.

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Dave Bartus	Elaine: Region 10 has been dealing with an issu...	05/31/2011 11:38:44 AM
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From: Dave Bartus/R10/USEPA/US  
To: Elaine Eby/DC/USEPA/US  
Date: 05/31/2011 11:38 AM  
Subject: LDR regulatory question

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Elaine: Region 10 has been dealing with an issue at the Department of Energy Hanford facility that I'd like your input on. For the past year or two, we've been looking at a practice on the part of the Department of Energy, Richland Operations Office (and their contractor CH2MHill Plateau Remediation Company) known as "in-trench treatment." Hanford has two nominally RCRA-compliant mixed waste disposal trenches which receive a variety of low-level and mixed low-level wastes. A number of these wastes have sufficient radiological activity that DOE has determined that the disposal containers must be grouted

within the landfill (instead of soil covering). For containers containing mixed debris subject to LDR, DOE generally elects to apply the debris rule treatment standard of macroencapsulation. The issue that we've run into is that DOE is placing these containers in the disposal unit prior to macroencapsulation, then grouting the containers within the land disposal unit, arguing that post-disposal grouting satisfies the macroencapsulation. Historically, DOE has attempted to rationalize placement of un-treated wastes in a land disposal unit by saying that the wastes are being "Stored" until "in-trench treatment" has been completed, at which time the wastes are no longer being stored, but are disposed of. I find absolutely no provisions in federal or authorized state regulations authorizing storage of untreated wastes in a land disposal unit as a means of avoiding LDR treatment standards.

I've provided the Washington State Department of Ecology (the authorized state) with a fairly explicit regulatory interpretation that wastes subject to LDR treatment standards cannot be land disposed of unless applicable treatment standards have been met, whether as promulgated by EPA or as established through a treatability variance (for the sake of discussion, we can presume that the receiving land disposal units will not be receiving a no migration petition approval and that there will not be an extension of the effective date of the applicable LDR treatment standard). Despite a clear written (via e-mail) regulatory interpretation to the state, DOE continues to practice "in-trench treatment," and to propose validating "in-trench treatment" through a site-specific treatability variance. Earlier this year, NEIC conducted an extensive on-site inspection where this issue came up. While I can't speak to the findings NEIC may make (they are still drafting their inspection report), I think it is fair to say the NEIC inspectors eye-brows were raised when they observed untreated wastes within a land disposal unit undergoing "in-trench treatment."

One of the arguments that I've seen (and in the past largely subscribed to) is some of the waste containers that DOE manages are sufficiently large that it is impractical to macroencapsulate the wastes prior to placement in a land disposal unit, then move the grouted or macroencapsulated waste into the land disposal unit. Recently, I've come across an engineering analysis prepared several years ago that clearly demonstrates that DOE has transport and lifting equipment capable of managing very substantial containers, so the technical impracticability issue doesn't carry much weight (so to speak) in my mind.

I'd like your input and perspective on these issues as we move forward, perhaps with more formal written communications at the management level, to make sure we're consistent across the agency. The specific questions I have, based on the above, are:

- 1) Validate that LDR treatment standards must be met prior to placement in a land disposal unit, and that performing treatment to meet LDR treatment standards following placement in a land disposal unit is a violation of the applicable requirements of 40 CFR 268 Subpart C. 40 CFR 268.40(a) states that a prohibited waste identified in the table "Treatment Standards for Hazardous Wastes" may be land disposed only if it meets the requirements found in the table. However, in the document, RCRA Training Module - Introduction to Land Disposal Restrictions (40 CFR Part 268), September 2005 on page 3.3 they talk about LDR Applicability and Remediation Wastes (is this a remediation waste?) If so, we may have to investigate this language with staging piles, CAMUS, etc. However in this document at 2.9 it states, consistent with regulatory language that, "As a general principle, a hazardous waste must meet all applicable treatment standards before land disposal. See also 2.4 LDR requires waste handlers to fundamentally change the threat posed by hazardous waste before it is land disposed. Waste-specific restrictions are manifested as thresholds for adequate treatment, known as treatment standards. Once EPA restricts a waste and issues a treatment standard, the waste may be land disposed only after it meets the appropriate treatment standard." On page 2.6 there is also an exemption 40 CFR 268.4 for waste treated in surface impoundments. "Waste handlers may treat hazardous waste in surface impoundment without first meeting treatment standards provided that (1) the SI meets certain technological requirement; (2) the treatment residues that do not meet applicable standards are removed from the impoundment annually, and (3) the removed residues are not managed in another SI."
- 2) A site-specific treatability variance may, of course, establish an alternate treatment standard, but cannot authorize satisfaction of LDR treatment standards following placement in a land disposal unit.

I will acknowledge that this practice may be occurring at Hanford's Environmental Restoration Disposal Facility, a CERCLA-authorized mega-disposal unit, although I can't say for sure whether the practice is

limited to low-level wastes, or extends to mixed wastes. Our regional counsel has advised that this practice is on shaky grounds at best.

I'll be checking with Region 9 concerning their oversight of Nevada and mixed waste disposal at the Nevada Test Site, the other Department of Energy facility with mixed waste disposal capacity.

I'm on-site at Hanford this week, and I expect that I'll be discussing these issues with the Washington Department of Ecology. If you have some thoughts that you can pass on this week, I'd sure appreciate your feedback. You can reach me via e-mail, or on my cell at (509) 948-3212. In the meantime, I hope all is well with you.

Dave